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'More Biosocial Research'

PIH's Farmer Speaks on Antibiotic Resistance

By Belle Waring

The world is hungry for heroes—they put us in touch with our dreams, our own heroic potential. The greatest among them are also great teachers. They have the magic.

Dr. Paul Farmer is one of them.

"There is so much promise now for medicine and for global health," he recently told a packed house in Masur Auditorium. His lecture, "Community-Based Care for Infectious Disease and the Future of Antibiotic Resistance," was part of the Grand Rounds Great Teachers series.

A distinguished physician, medical anthropologist and author, Farmer's groundbreaking model of community-based care in areas of great poverty has proven medically effective and cost-effective—"a concept once thought impossible," said NIAID director Dr. Anthony Fauci in opening remarks.

He called Farmer "a global hero and a legend."

Addressing inequalities in health-care access is the mission of Partners In Health (PIH), the nonprofit organization that Farmer co-founded in 1987. In Haiti, Peru, Siberia, Rwanda, Lesotho and Malawi, as well as inner-city Boston, PIH provides



Dr. Paul Farmer

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Moonlighting Author

NIDCR's Kuska Writes Second Hoops Book, A Third Planned

By Rich McManus

Just before Christmas, Bob Kuska, a science writer at the National Institute of Dental and Craniofacial Research, published his second book in 4 years on the topic of basketball in America.

The new volume, *Cinderella Ball: A Look Inside Small College Basketball in West Virginia*, was



Author Bob Kuska

published by the University of Nebraska Press and follows a plot line similar to the movie *Hoosiers*. In that film, explains Kuska, a small high school team that no one expects to accomplish anything winds up in the state championship game.

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A Year of Events

'Evolution Revolution 2009' Celebrates Darwin's Birth, Book

By Karin Jegalian

This year marks the 200th anniversary of Charles Darwin's birth and the 150th anniversary of the publication of his masterwork, *On the Origin of Species*. The book famously introduced the concept of evolution by natural selection, the principle that has organized the study of biology ever since.

A series of events at NIH, collectively called Evolution Revolution, will commemorate these anniversaries and highlight the importance of evolution in current studies of biology and medicine.

The celebration is designed to engage everyone from intramural scientists to the public and young students. Events will include lectures, exhibits, performances and publications.

For Thursday, Feb. 12, Darwin's birthday, NHGRI is arranging a morning symposium on evolution to be held at Masur Auditorium and

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briefs

Author Grenny Featured at DDM Seminar

The Deputy Director for Management (DDM) announces the second DDM seminar of the 2008-2009 series "Management and Science: Partnering for Excellence." The event on Thursday, Feb. 19, from 11 a.m. to noon in Masur Auditorium, Bldg. 10 will feature Joseph Grenny, the *New York Times* bestselling author of *Crucial Conversations: Tools for Talking When the Stakes Are High*.

A business communications expert, Grenny guides audiences in learning how crucial conversations can achieve highly positive employee interactions, synergies and agreements within organizations. He has been cited in numerous newspapers such as the *Washington Post*, *New York Times*, *Los Angeles Times* and *Wall Street Journal* and has appeared on more than 100 radio and television programs including CNN, Bloomberg, CNBC and the *Today Show*.

Refreshments will be served in the Masur reception area following the program. Presentations will be available via NIH Videocasting at <http://videocast.nih.gov/>. Sign language interpreters will be provided. Individuals who need reasonable accommodation to attend should call (301) 496-6211 or the Federal Relay Service at 1-800-877-8339.

For more information about the DDM Seminar Series, visit www.ddmseries.od.nih.gov/.

STEP Forum on Trial Recruitment

The staff training in extramural programs (STEP) committee will present an Administrative Strategies forum on the topic "Finders, Keepers: Recruitment and Retention of Research Participants in NIH-Supported Clinical Trials," on Thursday, Feb. 19, from 8:30 a.m. to 12:30 p.m. in Natcher Bldg., Rms. E1-E2.

Clinical trial investigators have difficulties recruiting and retaining volunteers. Insufficient numbers, lack of diversity and attrition pose threats to the progress and success of these studies. What motivates individuals to participate in clinical trials? What are the strategies for long-term retention? What are roles for scientific review officers, program officials, grants management specialists and data and safety monitoring board members related to study design and progress? This forum will explore challenges to the identification, enrollment and retention of research participants in clinical trials. It will also discuss successful techniques for recruitment and retention of study participants.

Symposium Honors NIH's Rall and Robbins

NIDDK will host "Celebrating the Life and Science of Ed Rall and Jack Robbins," on Friday, Feb. 13 in Lister Hill Auditorium, Bldg. 38A. An international cast of speakers will highlight the scientists' unique contributions to understanding hormone transport and thyroid carcinogenesis and their deep commitment to recruiting and mentoring young investigators. Rall (at left in drawing above) and Robbins were friends and colleagues for more than 50 years. They both left this life in 2008; Rall died Feb. 28 and Robbins followed May 12. Register for the symposium at www3.nidDK.nih.gov/fund/other/Rall-Robbins2009.



Management Intern Program Recruits Applicants

Outstanding men and women interested in pursuing careers in public service are encouraged to apply for the 2009 NIH Management Intern (MI) Program. The 2-year program offers an opportunity to explore different administrative career fields, gain insight and train for leadership roles. Recruitment will open on Feb. 13 and close Mar. 13.

During the MI program, individuals complete rotational assignments that introduce them to potential administrative career tracks in budget and finance, communications and public liaison, legislative analysis, program planning and evaluation, grants and contracts, information technology, human resources management, central services management, science policy, program and management analysis and general administration.

To find out more about the MI program, attend one of the information sessions listed below. The application can be found online at <http://internships.info.nih.gov>. For more information contact Cheronn Collins, (301) 594-2507.

Information Sessions (all are noon to 1 p.m.):

- Feb. 13 Bldg. 10/2C116
- Feb. 20 Bldg. 31/6C10
- Feb. 27 Neuroscience/B1B2, 6001 Executive Blvd.
- Mar. 4 Bldg. 31/6C6 (NIEHS videoconferencing, Bldg. 101)
- Mar. 6 EPS/Classroom 9

nih record

New Process for Providing Funding Information Debuts

NIH recently began a new process for providing the public detailed funding information for 215 major areas. Called Research, Condition, and Disease Categorization (RCDC), the new process uses knowledge management and computerized, standardized tools to provide consistent and transparent NIH research funding information.

The new information is reported in a table titled, "Estimates of Funding for Various Research, Condition, and Disease Categories," located at www.report.nih.gov/rcdc/categories.

The public can use this information to view the total funds spent in each category for the current fiscal year and previous fiscal years based on grants, contracts and intramural research.

"For the first time, beginning this year the project listings and the associated dollar amounts will be publicly available," said project director Dr. Timothy Hays. By clicking on each of the categories, the public can access full project listings for that category and view, print or download the detailed report. Links to patents and publications associated with each project also will be available in the next few months.

The 215 categories reported through the RCDC process are the same ones that have historically been requested by and reported to Congress and the public at the end of each fiscal year. The RCDC process does not, therefore, reflect the entire NIH research portfolio and budget.

RCDC does not affect the way NIH funds research or determines its research priorities. The RCDC process will not change the way NIH makes awards throughout the year for medical research or the way researchers apply for grants.

For more information about the RCDC process, go to <http://report.nih.gov/rcdc>. For Frequently Asked Questions about it, visit <http://report.nih.gov/rcdc/faqs>.—Karen Silver

NIH's Paul Wins Delbrück Medal

NIH immunologist Dr. William E. Paul was recently awarded the Max Delbrück Medal in Berlin. Paul, chief of the Laboratory of Immunology, was honored for his work on a key regulator of the immune system, interleukin 4. Andreas Radbruch, scientific director of the German Rheuma Research Center Berlin, said of Paul, "His claim to fame is the discovery of the molecular bases of the immunological memory driving allergy. His discoveries have been essential for our current understanding of how immunological memory works as such and how we may be able to manipulate it for the benefit of vaccination."



Rall Cultural Lecture To Feature Gawande, Feb. 11

Surgeon and writer Dr. Atul Gawande will deliver the NIH Cultural Lecture, newly renamed the J. Edward Rall Cultural Lecture, on Wednesday, Feb. 11 at 3 p.m. in Masur Auditorium, Bldg. 10. He will speak on "The Science of Failure in Medicine."

Gawande is a staff member of Brigham and Women's Hospital, the Dana-Farber Cancer Institute and the *New Yorker* magazine. His research focuses on reducing deaths, complications and disparities in surgery in the United States and abroad. This work includes examination of patterns of avoidable surgical complications, rates of surgery globally and the development and testing of techniques to reduce complications. A large part of this work is carried out through WHO's Safe Surgery Saves Lives program, which he directs.

In 2006, Gawande received a MacArthur Award for his research and writing. His book *Complications: A Surgeon's Notes on an Imperfect Science* was a finalist for the National Book Award in 2002 and is published in more than 100 countries. His most recent book, *Better: A Surgeon's Notes on Performance*, was a *New York Times* bestseller and one of Amazon.com's 10 best books of 2007.

Last December, NIH acting director Dr. Raynard Kington approved the renaming of the Cultural Lecture, part of the Wednesday Afternoon Lecture Series, in honor of the late Dr. Ed Rall, a consummate scientist, a charismatic mentor and recruiter and an engaging Renaissance man who profoundly influenced the style and substance of the NIH intramural research program. It was Rall who recommended in 1984 that NIH add a cultural lecture to its Director's Lecture series, reflecting his broad interest in science and his desire to enrich the NIH scientific community.

2009 NIH CORE Week, Feb. 9-13

NIH will mark CORE (Conditioning and Relaxation) Week from Feb. 9-13. It will highlight the science and practice of different modes of physical activity and their relaxing counterparts. The various short seminars, workout sessions and lectures will be held over the course of 5 days. It is open to NIH employees and the public and is a part of the NIH HealthierFeds initiative. Participants will learn about the benefits of conditioning and relaxation and will be able to experience them first-hand.

Sign language interpreters will be provided. Those who need reasonable accommodation to participate should contact Chris Gaines at (301) 451-3631 and/or the Federal Relay (1-800-877-8339). Bring your own fitness mat whenever possible and bring one to share. All events are free. For a complete listing of CORE Week events near you, visit <http://dats.ors.od.nih.gov/pdf/core.pdf>.

KUSKA

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This is the cover art of Kuska's new book about basketball, published by the University of Nebraska Press.

A similar story presented itself to Kuska 4 years ago. He had completed his first book—*Hot Potato: How Washington and New York Gave Birth to Black Basketball and Changed America's Game Forever*, published by the University of Virginia Press—and was spending his daily commutes between NIH and his 8-acre retreat in Shepherdstown, W. Va., thinking up new creative projects to occupy the train ride.

"I read John Feinstein's [occasional *Washington Post* sportswriter and prolific sports author] book *The Last Amateurs* while battling a case of food poisoning," he recalls. "He wrote about the Patriot League, a Division 1 NCAA program. It was supposed to be about the last true amateurs in sports."

But Kuska, an avid basketball fan and historian, knew from attending Shepherd College basketball games in Shepherdstown that "the real, more interesting (amateurs) were those who play in small colleges. They worked just as hard as the kids in Division 1."

Intrigued by the passion of players in a league little noticed by the public or press, Kuska wanted his book to answer two questions: What happens when towns stop gathering at games as a social nexus? And what do kids who have no hope of NBA careers get out of the experience?

"These are kids who travel to games in vans driven by their coaches," Kuska explained. "They eat their meals at McDonald's and play in front of what they call 'funeral crowds'—family and friends."

Kuska was also interested in larger cultural themes: "The things that make people different—religion, politics, race—are erased when people are rooting for the home team. But across the country, people are not supporting their local teams anymore. They can stay home and watch a tripleheader on ESPN any night of the week." *Cinderella Ball* examines what is lost in the transition.

For his book, Kuska focused on a single school, Alderson-Broadus College in Philippi, W. Va., which had enjoyed boom years as a coal-mining town but had fallen into decline. Real life provided the script for his book.

"Prior to the 2001-2002 season, the coach at

A-B became disgruntled and walked out on the team 2 weeks before the season started. He had been offered better pay to coach at a local high school," Kuska explained. "There was complete chaos. The athletic director pleaded with the kids [in the basketball program] to stay. He promised to find a coach, but he really had no clue."

In desperation, the AD contacted a former A-B basketball standout from the 1970s, who had coached high school basketball in Cleveland but had since taken a job in a factory.

"This guy, Greg Zimmerman, had to leave his wife and two daughters behind, and took a 40 percent pay cut" to return to Alderson-Broadus, Kuska relates. As in the film *Hoosiers*, "the players hated him. He stressed the fundamentals, and told the kids they didn't know how to play. These were a bunch of slow-footed white guys from West Virginia, and one black kid from P.G. County. The tallest guy was 6'6'."

In the space of a single season, Zimmerman transformed the Battlers; they won their conference tournament in his first year there. "They went from famine to feast."

Kuska calls his new work "a then-and-now book. I studied how the town used to support the team during the coal-boom years, then tailed off as cable TV came in and March Madness became part of American culture." He followed A-B basketball, a Division 2 program, for 4 years, visiting the school periodically and calling Coach Zimmerman after most games.

Although on sale for only a short time, *Cinderella Ball* has garnered excellent reviews. A reporter for *The Sporting News* called it a "wonderfully written elegy" and respected basketball authority Richard Lapchick labeled it "monumental."

The University of Nebraska Press had offered to bring the 328-page book out in hard cover, but Kuska asked that it debut as a cheaper (Amazon.com sells it for under \$15) paperback. He also is going for the 3-point play: Nebraska has already contracted with him to produce a third basketball book by September 2009.

"It's going to be about my favorite player, Archie Clark," he said. Clark played for five teams—most prominently the Baltimore Bullets and Philadelphia 76'ers—in a 10-season (1966-1976) pro career.

"He was a hero of mine growing up," Kuska said. "His career spanned a key period in the NBA.

Black players were becoming more prominent, the league was growing in popularity and the competition for players between the NBA and ABA was escalating salaries. Archie was always involved in contract disputes. At one point he was in a trade involving Wilt Chamberlain.”

The book will be titled *Shake and Bake: The Life and Times of Archie Clark*. Kuska has already met with and continues to speak on the phone with Clark, who now lives outside Detroit. Like the other books, this one “is a labor of love. I don’t care about making money, but it’s really cool for me. This is my nostalgia, this is what I grew up with. I’m a good person to tackle this story.”

Rosa Is NIAID Mentor of the Year

A committee of NIAID postdoctoral employees recently selected Dr. Patti Rosa as the first NIAID Mentor of the Year for having an exceptionally positive impact on the professional experience of postdoctoral fellows.



Rosa is a senior investigator working on Lyme disease in the Laboratory of Zoonotic Pathogens at Rocky Mountain Laboratories. “I’m proud and pleased by this because it’s the part of my job that I worry about the most,” Rosa says. She will be presented the award Mar. 9 during NIAID’s annual fellows retreat.

FEW Chapter Names New Leadership

The Bethesda chapter of Federally Employed Women (FEW) recently held an installation ceremony for new officers. They include Patricia Butler, secretary; Towanda Carroll, treasurer; Lanette West-Johnson, vice president; and Helen Robinson, president.

The chapter began operating in 1990 with four women at NIH who addressed such issues as job opportunities, training programs and issues concerning women, including ending sex discrimination in the workplace. The chapter will celebrate 20 years of existence at NIH in 2010. More information on upcoming events and programs will be available soon, along with the makeover of the chapter’s web site.

Trained and Ready Defibrillators Used to Save Heart Attack Victims

By Maggie McGuire

A small number of brave staff gave the greatest holiday gift possible—life—to two victims of cardiac arrest in December 2008. The responders’ quick action and the availability of automated external defibrillators (AEDs) helped both situations end positively.

As part of her certification to teach aerobics, Jewell Webb took a cardiopulmonary resuscitation course and learned to use an AED. She put the class material to use on Dec. 15 at the Rockledge Fitness Center when she and two other NIH employees responded to an incident of cardiac arrest. Webb, who works for NIDA, and Peggy Fitzgibbon and Heather Bridge, both of NIAID, performed compressions and gave breath to the victim while waiting for paramedics to arrive. When their efforts failed to bring on a consistent pulse, the women deployed the defibrillator to shock his heart.

“It was a life-altering experience,” said Fitzgibbon. The survivor of the arrest expressed his gratitude in an email to the three: “Thanks for saving my life!...I was very lucky to have this happen in the gym with CPR-trained people around.”

The crew at contractor Verizon’s office in the NIH Executive Blvd. location is required to be trained in CPR. When a coworker dropped to the ground on Dec. 3, Steve Elmore and Wesley Reynolds knew what to do and sprang into action. Their fellow employee returned to work recently, Elmore said.

“I felt pretty proud that I could help,” added the NIH contractor. “People think it’s a joke—why do we need this training every year? I encourage everyone to seek the training, if not through work than at a local firehouse or community center.”

Michael Dunn, AED program manager in the Division of Occupational Health and Safety, ORS, says there are 150 of the machines on campus and about 140 in off-campus locations. “We have the best automated defibrillators on the market right now,” he said. He noted, however, that some departments and divisions maintain their own defibrillators independent of his office.

Visual instructions on the units tell users where to place the pads on the chest of the person in cardiac arrest. The defibrillator automatically reads the heart rhythm of the victim, reports audibly if a shock is necessary and, if so, delivers an electric current. After another heart-rhythm reading, the machine administers a second shock, if necessary, and instructs the responder to continue with resuscitation attempts.

Even though efforts have been made to make the process user-friendly, people should still familiarize themselves with the operation of the machine before a crisis occurs, Dunn said.

The Occupational Medical Service provides classes in Bldg. 31 multiple times a week. Sign up at http://dohs.ors.od.nih.gov/cpr_training.htm. Dunn’s office trains on-site as requested; call (301) 451-3294 for more information.



Jeanette Black of NINDS and Kirk Druey of NIAID practice applying defibrillator pads while continuing compressions on a mannequin during a training course on Jan. 21.

medical care and social and economic support for patients and their families. Those who cannot pay—the majority—receive care for free.

The keystones of the program are community health workers, the *accompagnateurs* (“accompanists”) who provide health services and support for their neighbors. The French/Creole term comes from Haiti, the poorest country in the western hemisphere and the first locus of PIH.

Because *accompagnateurs* are trained to provide comprehensive support, assessment and monitoring, they increase treatment compliance and improve health outcomes.

Importantly, they are not volunteers, but employees, part of the community’s economic fabric. In addition to delivering primary care and treatment for infectious diseases such as HIV/AIDS and tuberculosis, PIH is an organization that generates local jobs.

“It was Paul’s groundbreaking model in Haiti upon which we actually based the President’s Emergency Plan for AIDS Relief (PEPFAR),” Fauci said.

PEPFAR is a U.S.-backed international health initiative for HIV/AIDS prevention, treatment and care. It is the largest such funder in the world.

Thanks to PEPFAR and the Global Health Fund, Farmer said, “in the last 5 years there’s been a real sea change...having a strategy to slow acquisition and transmission of drug-resistant pathogens is a ranking priority, and we [at PIH] are very proud to be working on this with the NIH.”

Farmer’s teaching style is celebrated for its wit, boldness and depth. Some lecture highlights:

- How did Farmer, now on the faculty of Harvard Medical School and Brigham and Women’s Hospital, combine academic medicine with work in Haiti and other areas? He urged students and trainees to “think outside the box” and to question “not with rhetoric, but rather with programs, the conventional wisdom of the time.”

- Dual training in medicine and anthropology helped him “in contemplating antibiotic resistance in all its complexity,” Farmer said. “There has to be engagement beyond the physician... What structures might be put in place so that the drugs that we have last longer?” That’s where community-based care comes in.

- Hospital doctors in poor areas may admit up to 80 patients per night, yet lack the tools to save them. “That would drive anyone away from clinical medicine,” Farmer noted. Give staff the tools they need and you’ll see “a huge effect” on recruitment and retention.

- Some Haitian patients who thrived and became *accompagnateurs* themselves traveled with Farmer to speak at Harvard. “I want to thank all you bourgeois people for your help,” said one, getting a big laugh.

- With HIV now a shrinking epidemic in Haiti, Farmer said, it’s crucial to convey to trainees how “disease-specific vertical interventions”—such as a PEPFAR-funded AIDS program—may also strengthen primary care.

- Can Farmer’s model be replicated? Two years after Haitians trained by PIH went to Rwanda to build infrastructure, offer services and train local people, fully 98 percent of 223 patients who had been on community-based anti-retroviral therapy during that time had a suppressed HIV viral load, at an effective cost.

- In the U.S., “among some patient subsets, a Haitian-style model can save their lives.”

In conclusion, Farmer said, “You can’t understand the phenomenon of drug resistance without having a social-science perspective. These mutations [in microorganisms] are created by human actions. Biosocial research that is quantitative, rigorous and goes from genotype to social policy is the only thing that can reveal how this all works.”

A rule of great teaching is to love your material. That love is contagious and students catch it. After the talk, Farmer was mobbed by young people. Half an hour later, his colleagues were still trying to draw him away.

“Otherwise,” one said, “Paul would be here until dark. Look at these kids. He’d answer every one of them.” 🐼

Bug vs. Drug: What Is Resistance?

If you’ve ever gone to bed feeling chipper and awakened with a sore throat, you know how rapidly germs can hit.

Compared to humans, germs reproduce rapidly and adapt swiftly to their environment. They are quick to make “mutations”—changes that help them survive drug treatment.

Such survivor germs are “drug-resistant.” As they pass on their hardiness to their offspring, they produce generations of bad bugs—a potential source of epidemics and a global problem.

For example, the notorious methicillin-resistant *Staphylococcus aureus* (MRSA) can no longer be treated with methicillin. It takes vancomycin, an even stronger drug, to knock it out.

If MRSA mutates to resist vancomycin, we can foresee an escalating game of catch-up.

Some human behaviors aren’t helping. Physicians wrongly prescribe antibiotics for common colds (viruses don’t respond to antibiotics). Patients can be non-compliant with treatment.

Why is it so important to take your meds according to plan? You need to kill off all the bugs. If you don’t, the ones that survive are the most resistant. They reproduce so that the next time they strike, you have a more resistant batch, then you have to take another, or stronger, drug.

For millions of people with HIV, TB, malaria and other chronic infectious diseases, drug-resistant germs can be life-threatening.

That’s the bad news. Here’s the good: The Partners In Health model of community-based care has proven effective in increasing patient compliance and improving outcomes.

Workshop Examines Cost-Effectiveness Research in Health Care

By Ray Bingham

Health care spending in the U.S. is rising rapidly. While currently at \$2 trillion per year, this figure is projected to double to \$4 trillion by 2020, according to the National Center for Health Statistics. To help stem this rise, there is a growing need to conduct economic evaluations of both new and existing health care practices. Nurses, the largest component of the health care workforce, are well positioned to contribute to decisions on the efficient use of health care resources.

This was the motivation for a recent workshop, co-sponsored by the National Institute of Nursing Research and the NIH Office of Rare Diseases, titled "Integrating Cost-Effectiveness Analysis into Clinical Research." The workshop brought together over 50 experts in nursing, health care and economics to discuss ways to use cost-effectiveness analysis (CEA) in studies conducted by nurse scientists and other researchers.

NINR deputy director Dr. Mary Kerr noted, "The average American spends \$7,100 per year for health care-related costs. NINR supports studies that not only look at how interventions can keep individuals healthy, but also...have a positive impact on resources."

Presentations during the 2-day event covered a range of topics. As defined by Dr. Patricia Stone of Columbia University School of Nursing, CEA involves a comparative analysis of alternative courses of action in terms of both their costs and consequences. Dr. Kevin Frick, a professor at Johns Hopkins Bloomberg School of Public Health and a member of the NINR Advisory Council, remarked that CEA is only one component of the research needed to inform health policy and will not necessarily result in less health care spending. Dr. Mark Roberts, a professor of medicine at the University of Pittsburgh, noted that a health care therapy must first be proven effective before being evaluated as cost-effective.

An Effective Intervention


As one example of an intervention that is both effective and cost-effective, Dr. Bernadette Melnyk, dean of Arizona State University College of Nursing, presented her research with parents of preterm infants in the NINR-funded study, Creating Opportunities for Parent Empowerment (COPE). According to Melnyk, in 2005 alone, preterm births cost the U.S. at least \$26.2 billion, or \$51,600 for every infant born preterm.

COPE teaches parents about typical preterm infant characteristics and behaviors, helping them

care for and interact with their infants in developmentally appropriate ways. This program contributed to shortening the infants' hospital stays, resulting in a savings of \$5,000 per infant. After publishing these results in the journal *Pediatrics*, Melnyk's office received calls about COPE from neonatal units across the country. Melnyk's vision is to improve the clinical care and the health outcomes for all premature infants and their parents, while lowering the costs of care.

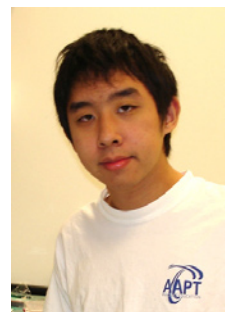
A Global Concern

At the end of the workshop, participants noted that concern about health care costs reaches around the world. They identified the need for interdisciplinary collaboration between clinical researchers and economists, as well as for researchers to better disseminate their results to health care policy makers and the public.

Participants emphasized that cost-effectiveness is not the same as cost-cutting. Rather, they observed that researchers will be asked to verify that health care interventions are both effective and cost-effective. Improving the use of CEA will help inform health care decisions on the allocation of health care resources at the highest level. 

NIAMS Student Wins Gold at Biology Olympiad

Jonathan Liang, a 17-year-old student at Thomas S. Wootton High School in Rockville, thought it was pretty cool when he made it into the highly selective NIH intern program. He's been working at NIAMS in the Molecular Immunology and Inflammation Branch, headed by Dr. John O'Shea. Recently, he distinguished himself even further by being selected to compete in the 19th International Biology Olympiad held in Mumbai, India. What's more, he came home with a gold medal.



In the NIAMS lab, Liang has been assisting researchers who look at the role that epigenetic modification—that is, heritable changes in a cell that are influenced by the environment, but are not contained in the sequence of the DNA—plays in helper T cell functions.

His time at NIH has been inspirational. "Science is more interesting than [a lot of people] think," he said. "The opportunity to improve the quality of life for people living with diseases is something that I really want to be a part of."

The International Biology Olympiad is the largest high school biology competition in the world and the road to Mumbai was a long one for Liang. First he had to compete with 10,000 other students in a series of three national examinations.

Only four U.S. competitors were selected from that pool. Along with his three American colleagues and two scientific mentors, Liang traveled to Mumbai, where he competed with students from 55 countries. The international finalists competed in four 1-hour practical exams and a final theoretical exam. Of the 23 international gold-medal winners, Liang ranked among the top three.

Dr. Lai Wei, who is mentoring Liang at NIAMS, had nothing but praise. "The most impressive thing to me is his passion to learn. I've never seen any other high school student who is as self-motivated...to grasp everything and think creatively."

Most student interns only come for the summer, but Liang works in the NIAMS lab throughout the school year and will obtain credit for his time here. In the fall, he'll continue on to college. After he completes his undergraduate work, he plans either to attend medical school or pursue a Ph.D.



DARWIN

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Above:

This photo by Dr. Eric Green, director of NHGRI's Division of Intramural Research, is part of the Galapagos photo exhibit on display now in the Clinical Center.

an afternoon of lectures for the public and high school students at the Smithsonian Institution's National Museum of Natural History.

Now through Feb. 26, the Clinical Center is featuring photographs of the Galapagos Islands, where Darwin conducted fieldwork and developed key insights. Some of the photographs, which are displayed in the East Gallery and East Alcove Gallery, are the work of NIH employees, patients or grantees.

The National Library of Medicine and the Office of NIH History have prepared an exhibit on Darwin and the rise of evolutionary theory that will be displayed for much of the year in Bldg. 38, starting Feb. 9. There will also be a parallel traveling exhibit.

NIH and the National Academy of Sciences are also co-sponsoring the Evolution and Medicine Lecture series. In these free, public lectures, scientists describe how evolution applies to their area of expertise. The first lecture will be Feb. 9.


Several existing series and publications are also expected to feature evolutionary themes during 2009. For example, the NIGMS electronic newsletter *Biomedical Beat* and magazine *Findings* have special issues dedicated to evolutionary biology.

The multifaceted activities at or around campus are also expected to include a juried multimedia art exhibit at the Clinical Center, a play by the Underground Railway Theater of Cambridge, Mass., a possible performance by the Liz Lerman Dance Exchange and the showing of one or more films with an evolutionary theme in the Science in the Cinema film series.

The National Library of Medicine plans a 7-week film series in September and October showing movies and television programs that have imaginatively responded to the implications of evolutionary theory.

For students and teachers nationwide, the Office of Science Education is preparing a curriculum supplement on evolution that will be available in 2010.

The full range of Evolution Revolution events and activities will be posted at www.science.education.nih.gov/evorevo.

NIH's events are part of an international celebration of Darwin's life and work. Universities, libraries, museums and others throughout the world are planning a wide range of activities in honor of Darwin Day on Feb. 12. See darwin-day.org for an overview. 



Shown with acting Asian and Pacific Islander American Program manager Tyrone Banks (third from l) are new APAO board members (from l) Donna Wells, Dr. Rashmi Gopal-Srivastava, JoAnne Wong, Dr. Alex Wang and Phyllis Chui.

APAO Installs New Board for 2009

The NIH Asian and Pacific Islander American Organization (APAO) recently held its annual awards ceremony at which the newly elected 2009 APAO board members were installed. The new officers include Dr. Rashmi Gopal-Srivastava of the NIH Office of Rare Diseases, president; Dr. Alex Wang of CIT, vice-president; Donna Wells of NEI, treasurer; JoAnne Wong of NIMH, co-executive secretary; and Phyllis Chui of NLM, co-executive secretary.

APAO conducts monthly meetings open to all who are interested in furthering its mission. It supports equality and fairness in the workplace and enhances cultural awareness through programs such as the observance of Asian Heritage Month, an annual awards ceremony and diversity events. For more information on APAO and its activities, visit www.recgov.org/r&w/apao/index.htm or contact one of the officers.



NIH Hosts Fifth Women's Health Research Symposium

NIH showcased new research in women's health recently at the fifth annual Interdisciplinary Women's Health Research Symposium.

Junior investigators funded under the Building Interdisciplinary Research Careers in Women's Health (BIRCWH) program and senior investigators funded from the Specialized Centers of Research (SCOR) on Sex and Gender Factors Affecting Women's Health presented results of their research in speeches and poster sessions. The research featured 15 key topics in the science of sex and gender, including perinatal depression, Cesarean delivery on request, the effect of gender on patient-physician interaction and urinary incontinence among women with diabetes.

"Interdisciplinary research and collaboration lead to new energies, fresh insights and synergy," said Dr. Vivian Pinn, director of the Office of Research on Women's Health.

BIRCWH supports research career development of junior faculty members who have recently completed clinical training or postdoctoral fellowships and who are beginning research in women's health. SCOR has been successful in translating research from the laboratory to the clinical setting.

Symposium keynote speaker Dr. Stephen Katz, NIAMS director, discussed the value of translating science into improved patient care. He stressed the importance of interdisciplinary collaboration in the transfer of research to practice through strategic initiatives such as those under the NIH Roadmap.

"The public is ravenous for medical information," he said, "but we also have to help those not [already] affected by particular diseases by determining who is susceptible...and translating that information into risk factors that can be communicated to the general public."



Other highlights from the symposium included Dr. Samantha Meltzer-Brody of the University of North Carolina who discussed her finding that women who present to their physician with perinatal depression often have symptoms more related to anxiety disorder, such as hypervigilance, anxiety, obsessing and feelings of dependency.

Dr. Diana Dow-Edwards of the University of Miami spoke on her findings that women sensitize to cocaine faster than men do. However, such sensitization was reduced by the administration of an anesthetic drug called isoflurane. On a related topic, Dr. Helen Fox of Yale University discussed her research that found progesterone may decrease the rewarding effects of cocaine in women.

The symposium was sponsored by ORWH in collaboration with NICHD, NIAMS, the Agency for Healthcare Research and Quality and the Food and Drug Administration. ①

Top:

The fifth annual Interdisciplinary Women's Health Research Symposium, sponsored by ORWH in collaboration with NICHD, NIAMS, the Agency for Healthcare Research and Quality and the Food and Drug Administration, included lectures and a poster session.

Below:

At the event, junior investigators funded under the Building Interdisciplinary Research Careers in Women's Health program and senior investigators funded from the Specialized Centers of Research on Sex and Gender Factors Affecting Women's Health presented their findings. Dr. Vivian Pinn (r), director of NIH's Office of Research on Women's Health, talks with participants.

PHOTOS: MICHAEL SPENCER

m milestones

NIH Couple Retires After 87 Total Years

By Belle Waring

Dr. J. Frederic and Mrs. Elizabeth Mushinski, whose match was made at NIH, are set to retire after 87 total years in NCI's Laboratory of Cancer Biology and Genetics.

"We are each still here in the same place," said Dr. Mushinski, "still married...still working."

"And still happy," said Mrs. Mushinski.

In 1965, Dr. Mushinski, a young research associate, joined Dr. Michael Potter's lab. That's where he met Elizabeth Bridges—"Betty"—a biologist on staff. They were investigating the molecular and genetic mechanisms responsible for antibody production—immunoglobulin genes.

"I was dead set against going out with somebody in the lab," said Dr. Mushinski. "But we both had a great love of music."

On their first date, they attended a concert. For the second, Dr. Mushinski proposed the opera *Turandot*. Although his tickets were standing room only, Bridges accepted.

"I thought, 'This is my kind of woman,'" said Dr. Mushinski. "Anybody who would stand for 3 hours to hear an opera!"

Turandot is the story of a princess who's a bit hard to get, "especially because she's killing all of her suitors," Dr. Mushinski said.

Life, happily, did not imitate art. When Dr. Mushinski departed for a year in Germany, Bridges visited him. And that, he said, solidified it.

"After a whirlwind courtship—not!" said Dr. Mushinski. "We were married on May 1, 1971."

The saying goes that long-term couples finish each other's sentences, but the Mushinskis' conversational style is not interruption so much as segue, a type of musical transition:

Mrs. M.: A lot of romances start in the lab.

Dr. M.: It's very intimate, friendly.

Mrs. M.: It's an informal situation. You do get

close, wandering around, doing what you need to do. You're not always sitting in one spot.

Dr. M.: Hierarchies get blurred. In Germany, it's Herr Doktor Professor. Here, our boss is Mike.

Mrs. M.: The lab is more of a family.

Dr. M.: Although we were never really in the same lab room, we were in the same section, so I was afraid [to date a colleague]. This whirlwind romance took 6 years.

Mrs. M.: I wasn't afraid. This might be a physician difference.

Dr. M.: But you had seniority.

Along with their work on protein expression and chromosomal translocation, as well as their love of music, they have in common a medical family background.

Mrs. Mushinski hails from a small town in North Carolina where her father was a physician "back when doctors made house calls, sometimes on horseback," she said. She recalled playing with the microscope her father kept at home.

After she graduated from Wake Forest University with a degree in biology, she moved to Richmond, Va., to work in a genetics lab, where she first heard about NIH. She joined Potter's lab in 1964.

"It's been wonderful," she said.

Dr. Mushinski spent his childhood in Beaver Falls, Pa. When he was 15, after his father's death, he, his two younger (twin) sisters and his mother moved to Bethesda, joining his grandmother and 3 aunts, all registered nurses.

After majoring in chemistry at Yale, he obtained his medical degree at Harvard Medical School in 1963.

"Back then, you had to choose—Ph.D. or M.D.," he said. He was advised that an M.D. would give him more options, "although that's less true now."

He became a principal investigator in the Laboratory of Genetics, which became the Laboratory of Cancer Biology and Genetics. He also joined the PHS Commissioned Corps, from which he is retired.

They both observe how NIH has changed: when they met here in 1965, there were more trees, no fence and it was easier to get tenure.

"One of my aunts worked in the OR in the Clinical Center," said Dr. Mushinski. "We got to see the CC being dedicated."



The Mushinskis are retiring after a combined 87 years at NIH.

“Money was just pouring into NIH,” he continued. “There was nothing you couldn’t do.”

“There seemed to be more possibilities,” said Mrs. Mushinski. “But every generation thinks things were better in their youth. Some things now are much better—computers.”

“We were allowed only 2 drafts [of a paper] because using carbon paper was so onerous,” said Dr. Mushinski, gesturing towards his monitor screen with a paper in progress: “Fifth draft,” he said.

After retirement, he plans to keep working as a volunteer both at Wolf Trap Center for the Performing Arts and at NIH, where he’ll keep writing papers and doing experiments. She is taking piano lessons. They both plan to spend more time with Stella, their beloved beagle mix.

Mentoring young scientists “is the part we’ll miss the most,” said Dr. Mushinski. “They’re our family.”



Colbert Named NIAMS Pediatric Branch Chief

Dr. Robert A. Colbert has been named chief of the Pediatric Translational Research Branch in NIAMS’s Intramural Research Program. He most recently served as director

of the division of rheumatology at Cincinnati Children’s Hospital Medical Center of the University of Cincinnati College of Medicine, with which he has been affiliated since 1994, when he joined the department of pediatrics.

Colbert earned his bachelor’s degree in chemistry and biology from Boston University in 1978, and his M.S. in biochemistry from the University of Vermont in 1980. In 1986, he received his Ph.D. in biophysics from the University of Rochester School of Medicine and the following year he received his M.D. from the same institution. Rochester was also the place where Colbert served his internship and residency in pediatrics, at the university’s Strong Memorial Hospital. He then completed a clinical fellowship in pediatric rheumatology at Duke University Medical Center and North Carolina Memorial Hospital of the University of North Carolina. He finished his postdoctoral research training in the department of microbiology and immunology at UNC.

Colbert is certified in pediatric rheumatology by the American Board of Pediatrics and is a member of several organizations including the American Academy of Pediatrics, the American Association of Immunologists and the American Pediatric Society. He has authored 53 papers and has served as an investigator on a number of NIAMS and other NIH and industry-funded research studies. He has received numerous honors and awards, including Pfizer Postdoctoral Fellowship and Scholar Awards, the James R. Klinenberg Science Award from the Arthritis Foundation and, more recently, recognition by the American College of Rheumatology with the Deborah Kredich Pediatric Rheumatology Service Award.

Winn Named Division Deputy at NCI

Dr. Deborah Winn has been named deputy director of NCI’s Division of Cancer Control and Population Sciences (DCCPS). She had been serving as acting associate director of DCCPS’s Epidemiology and Genetics Research Program (EGRP) since 2006. Prior to that, she was a senior epidemiologist and chief of the former Clinical and Genetic Epidemiology Research Branch in EGRP.

During her tenure in DCCPS, Winn has directed and coordinated NCI’s extensive extramural program of population-based research in cancer epidemiology. She has played critical roles in NCI’s bioinformatics efforts in population sciences and has served as a key spokesperson for NCI on epidemiologic topics of interest to Congress and the public. In addition to her longstanding collaborations and research activities in head and neck cancer epidemiology, she has represented NCI on several NIH working groups and advisory committees for genetics research. She also has served on national and international committees focusing on issues such as women’s health and the environment and tobacco-related health risks and regulation.

Prior to joining DCCPS in 2000, Winn was a senior investigator and branch chief for oral epidemiology at the National Institute of Dental and Craniofacial Research. She also is former deputy director of the division of health interview statistics at the National Center for Health Statistics, Centers for Disease Control and Prevention. Winn holds an M.S.P.H. and a Ph.D. in epidemiology from the School of Public Health, University of North Carolina at Chapel Hill. 📍



Dr. Deborah Winn is the new deputy director of NCI’s Division of Cancer Control and Population Sciences.

NIAMS Intern Wins Honor

Alexander Matsche, a biomedical research intern in the Cartilage Biology and Orthopaedics Branch, NIAMS, has been selected for the 2008 Workforce Recruitment Program (WRP) Outstanding Student Award.

Matsche was one of two students selected to receive the award from more than 450 students hired through the program; he was the only winner from the Department of Health and Human Services.

The Department of Labor's Office of Disability Employment Policy and the Department of Defense coordinate the WRP, which connects federal and private sector employers with highly motivated post-secondary students with disabilities.

This past summer at NIAMS, Matsche analyzed the roles of ERK1/2 and ERK5 signaling in adult human bone marrow-derived mesenchymal stem cells during cartilage differentiation. A graduate of Gallaudet University, Matsche will be completing his work as an intern at NIAMS and then plans to attend Skaggs School of Pharmacy and Pharmaceutical Sciences, University of California, San Diego, to get his doctor of pharmacy degree. Ultimately, he would like to be involved in the development of new drugs, either by returning to NIH or by working for a drug company.



Alexander Matsche with NIAMS's Sharon Nouzari Louis in the Great Hall of the Hubert H. Humphrey Bldg. in Washington, D.C.

Mali-NIAID Partnership A Model of Research Collaboration in Africa

Recently, an NIAID delegation led by principal deputy director Dr. Hugh Auchincloss participated in a series of high-profile events in Bamako, Mali, to reinforce successful NIAID collaborative research projects there. The focal point of the trip was the signing of a renewed partnership agreement between the U.S. and Malian governments, which strengthened the commitment of the two countries to continue scientific collaborations for the next 5 years.

NIAID scientists have been active in Mali since the late 1980s, when the institute partnered with Malian scientists on malaria vector research. Since then, the partnership has grown. In 1989, the Malaria Research and Training Center (MRTC) was established in Mali by an agreement between NIAID and the National School of Medicine and Pharmacy of Mali. The MRTC now serves as the primary research and training arm of Mali's malaria control program. In 2002, the length and extent of the collaboration between NIAID intramural scientists and Malian scientists were recognized by establishment of an NIAID International Center for Excellence in Research (ICER).

During the recent trip to Mali, the country's president highlighted the ICER as a model of collaboration between the United States and Africa and it is easy to see why. Since its inception, the ICER has continued the strong scientific collaboration between NIAID and Mali, including numerous malaria vaccine trials; the creation of advanced laboratories such as a biosafety-level 3 lab to study tuberculosis; and training opportunities for scientists from around the world. Most importantly, there is now in Mali a critical mass of investigators, both Malian and international, who work together on important research issues. The center is and will remain a regional center of excellence with significant research outcomes that result in improved public health policies and programs around the world. 🌍



NIAID principal deputy director Dr. Hugh Auchincloss (l) poses with village elders at a malaria vaccine trial site in Bancoumana, Mali.